THE PEDIC ITEMS

Official Organ of Chiropody

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Entered at the New York, N. Y., Post Office as Second Class Mail Matter.

VOL. 8 NEW YORK, DECEMBER, 1912. No. 17

Subscription Price $2.00 per year *25c per Copy*

DR. IRVIN MAYER

THE HISTOLOGY OF THE NAIL.

By E. Henry Edwards, Jr.

The nails are merely a modification of the epidermis, consisting of intimately united horny cells, covering the dorsal side of the terminal phalanx of each toe and finger. Let us consider the function, growth, and history of the nail, respectively.

The function, or use, of the nail is to protect the sensitive nerves, tissues, and blood capillaries at the end of the toes and fingers from an injury and also to give firmness to the same.

In our study of the growth of the nail, we will begin with the intrauterine life of the fetus. The nail is a production of the epiblast, one of the three layers of the blastodermic membrane of the ovum; the epiblast, also known as the ectoderm, is the source of the epidermis and its appendages. It is in the third month of the fetal life that the nail begins to firm, but only then on a fold covered with a lamina of embryonic epidermic cells. In the fourth month, a new layer of cells begin to form between the rete mucosum and the embryonic epidermic layer. This lamina is a thickening of the stratum lucidum, as we all know from the study of the histology of the epidermis, is one of the four epidermic layers. The stratum lucidum develops later into the horny cells of the body of the nail. The sulcus of the nail, or the nail-groove, is formed in this stage of the growth; but the nail does not reach the groove until the fifth month, after which the growth outward is uniform.

During the fifth month, the embryonic epidermic cells disappear, leaving only a part of them near the root of the nail. Now this leaves the nail exposed. At this time the nail is very thin but, after receiving additions from its under surface, it gradually becomes thicker. In the sixth and seventh months the nails are firm and continually growing forward. They do not reach the ends of the toes and fingers until the eighth month, when they are well developed as seen at the time of birth.

During the entire extra-uterine life the normal nail receives its life and nourishment from the root and matrix of the nail, which, like all other epidermic growths, receives in turn its nutrition from the plasma of the blood, the source of all physical life, through the capillary walls. The nail proliferates more quickly in children than in adults, and also in summer than in winter. The rapidity of growth differs according to the vitality of the person and the condition of the nail and the healthy state of the secretions. But usually a nail will re-secrete from four to five months. In children they are quite thin and supple but in the adult they become thicker and more horny and, as well, more opaque.

The nail adheres firmly to the matrix or nail-bed, termed such because upon this mold the nail is developed and set. The matrix consists of the cutis vera and stratum malpighii, containing no fat cells in its subcutaneous connective tissue. The cutis is a dense network of connective tissue fibers, elastic and flexible, and raised in longitudinal parallel ridges, which are very vascular. These papillae of the derma project upward, being smaller, less vascular, and of no regular arrangement toward the root of the nail. The rete malpighii fill in between these ridges of cone-like form. It also is a thin covering over the ridges as in all portions of the skin.

This tissue develops into the basal cells of the root and body of the nail. Under the latter the transition is more rapid than at the root, where it is gradual; thereby causing the root to be softer. As these soft cells advance forward they become harder and firmer, pushing ahead the ones previously formed, which take the place of the old, horny ones as they pass the free edge. Below the body of the nail, through the transition stage, the stratum Malpighii (rete mucosum) is gradually, yet rapidly, formed into the softer cells of the nail, which in turn develop into the harder cells until they reach the superficial, horny layer on the surface, when they come in junction with the cells proliferating from the root. These cells lie over each other distalward and are practically similar to those composing the epidermis.

The deeper and softer lamina of the nail cells are perpendicular to the nailbed, of columnar shape, and form longitudinal ridges parallel to the ridges of the matrix. The middle laminae of the nail cells are spheroidal in form, while the uppermost and superficial layer is composed of broader, thinner and flattened cells, called pavement cells, so closely con-

nected with each other that the limits of each cell is hardly noticeable.

A cell is a mass of protoplasm, which is a soft, gelatinous, granular substance, containing one or more nucleus, which is a minute oval-shaped body. Other parts of a typical cell are the nucleolus, centrosomes and attraction sphere, reticulum, hyaloplasm, chromaplasm, nuclear matrix and wall, which make the cell-life an interesting study. But this cell undergoes a change before it becomes a part of the nail. The protoplasmic material contracts, the nucleus diminishes and flattens, the fluid contents evaporates, and the wall hardens. This is the condition the cell appears in the nail. The life of a cell is four months in summer and five months in winter.

As the nail grows forward it gradually loses its convex form and flattens and broadens sideward; being held in place by the nail-fold, a collection of epidermic cells lying against the sides of the nail and over the root of the nail. The nail-fold increases in depth posteriorly.

The epidermis or cuticle continues to grow for a short distance beyond the nail-fold along the surface of the nail. This thin cuticular fold, known as the eponychium, is a production of the epitrichium, the embryonic epidermic lamina, which we spoke of in our study of the embryonic nail. This eponychium is a finer classification of the stratum corneum of the epidermis, while the stratum lucidum of the epidermis is developed into the body of nail, as we have already seen. The cuticle also grows over the end of the top of the toe beginning on the under surface of the nail, just a little behind the free edge. Now we understand the manner in which the nail is continuous with the epidermis.

The body of the nail is transparent, being homologous with the stratum lucidum; thereby allowing the vascular color of the matrix to shine through, the intensity of which varies according to the temperature of the individual. At the proximal end of the nail, the cells are opaque in a demilunar form, known as the lunula or "half moon." This is due to the presence of keratohyalin. The gloss or shine on the nail is the result of eleidin derived from the keratohyalin. It is over this lunula that we find the eponychium of the cuticle, which the manicure keeps back off the body of the finger nail.

As the elastic nail laterally convex, the side edges project into the sulcus of the matrix or commonly called the nail-groove. This is situated between the nail-bed and nail-fold. It consists of a thickened, somewhat horny, laminae of the stratum corneum of the cuticle. It is thus thick to protect the sensitive tissues, nerves and blood-vessels below from the pressure and possible incision of the edge of the nail.

We have considered each layer of the skin in its relation to the nail, except the stratum granulosum; barring out the subcutaneous connective-tissue layers, which are below the true skin and outside the domain of chiropody. The stratum granulosum is composed of broad, polyhedral cells containing fine granules, as the name implies. It is found in the region of the nail-root and lunula, being below the stratum corneum and stratum lucidum, which compose the body of the nail. Yet the stratum granulosum contains these peculiar granules known as keratin and eleidin shown at the lunula. The function of these granules is to transform the protoplasm of the cell into the horny scale.

The chemical composition of the nail is homologous to that of the cuticle. They contain a large proportion of carbon and sulphur. For a microscopical study of the horny part, sulphuric acid, caustic soda, or potash are employed to soften the nail.

ORGANIZATION OF THE CLASS OF 1913.

The members of the class of 1913 of the School of Chiropody of New York, assembled at the new quarters of the School, 51 East 125th Street, on November 13th, for the purpose of perfecting what will undoubtedly go down in the history of chiropody, as the "Vanguard Class," heralding the entry of this neglected branch of medical science among the honorable and scientific professions.

The chairman of the afternoon, after a few preliminary remarks, outlined the needs and purposes of class organization.

The following are the officers elected: President, L. H. Brown; Vice-president, G. A. Barber; Secretary-Treasurer, H. E. Ressler; Class Orator, Mrs. M. N. Bellwood.

THE DISEASES OF CHIROPODY.

A Description of the Symptoms, Etiology, and Pathology of the Various Foot Troubles.

By Dr. Lewis Durlacher.

CHAPTER XIII—(Continued).

Management of the Feet.

If there are blisters on the toes, and in situations where the skin is likely to be broken, they should be punctured with a needle, at the part where there is most serum collected, and the contents pressed out with a cambric handkerchief or a piece of lint. This should be done in the evening after bathing the feet so that they may be rested afterwards.

If the blister is situated on the point of the toe, or in any other part that is not very painful, it is better not to interfere, but to allow the serum or fluid to be absorbed, and when the cuticle is dried up to remove it. The same plan should be adopted if the feet are inclined to be chafed, as was directed for sportsmen.

Short shoes must not be worn on any account, especially when sporting or taking exercise, as they press on the tops of the toes (particularly on the great one, which is more sensitive than the others) causing in them, and at the root of the nail a degree of uneasiness which is seldom noticed, unless attended with pain and inconvenience.

Whenever blood is found on the top of the stockings, the toes and nails should be carefully examined, and if by pressing on the nails blood oozes out or collects round the roots, attended with redness and swelling of the toes, it may be inferred that the shoes are too short, and the toes are driven against their points.

The cause of the mischief should at once be removed, when a piece of lint wetted with zinc lotion, and applied round the nail and toe, will be sufficient to restore the parts to a healthy state. If the nail feels loose, it must be cut as closely as possible to the top of the toe, all pressure should be avoided, and the lint continued until the oozing has ceased.

The perspiration of the feet seldom requires medical influence, unless it is either to such an excess as to be annoying or the odor so very disagreeable as to be offensive.

The latter is a source of exceeding discomfort to many persons who are otherwise in good health. The odor is most perceptible in warm weather or in hot rooms, and in many cases is so foetid, that the society of the afflicted person is avoided. No effectual cure can be expected, but cleanliness is absolutely necessary; changing the stocking frequently, washing the feet with rose water, and rubbing them with scented oils twice a day is all that can be done. If the perspiration is profuse, an astringent lotion may be used after bathing, and before employing the scents. A solution of chloride of lime or sodium may be used with advantage.

I was requested by a gentleman to see his valet, as the odor from his feet was so very offensive, that he could not stay in the same room with him. He was, however, desirous to keep him in his service, if anything could be done to make him less disagreeable.

I recommended the servant to wash the perspiration off his feet with plenty of soap and water, and change his stockings twice a day before he went into his master's room. After bathing he was directed to rub a strong scented oil over his feet, and to use a solution of the chloride of lime twice a week. I also advised him to wear scent bags from the perfumers about his person. By following these instructions, he went on very well, and will no doubt continue to do so, so long as he takes care to follow my advice.

The most extraordinary case I have met with was that of a gentlemen, whose feet perspired so profusively that he changed his stockings whenever he had an opportunity during the day. The cuticle was white and shriveled, like the hands of a washerwoman who had been at work during the whole day. The odor was not remarkably offensive, but sufficiently so as to be a nuisance. His health was not much affected, but the complaint was a constant annoyance, as he could not go far from home, nor take sufficient exercise and at times was compelled to debar himself the society of his friends. If in hot weather he had from circumstances been prevented from attending to his feet as usual, his stocking would be so saturated as to cause the skin to peel of in large thick layers, leaving the feet very sore for many days. At the time I saw him, although his

stockings had been put on only two hours, they were quite soaked through.

When the skin breaks into fissures between the toes, the cracks extending around and under them, it is caused by an acrid condition of the perspiration, or the want of sufficient ablution. In either case it is easily cured by washing the parts with soap and warm water, and applying a piece of lint or rag, wetted with camphorate spirit or tincture of myrrh; or, if there be moisture, by dusting between the toes every morning with a muslin bag containing hair powder, chalk, or fuller's earth, dried and rubbed into a fine powder, the parts being first well washed and dried after.

When the toes adhere together from the pressure of the shoes, a piece of new silver or tissue paper, folded and cut to the shape of the top of the toes, placed as far down between them as it will go, absorbs the perspiration, and frequently prevents the formation of soft corns. It should be changed every day, and kept perfectly smooth. The want of perspiration, with a dry and burning skin, arises more from constitutional disturbance than from local disorder. Dyspeptic and rheumatic persons are particularly liable to it, and suffer more or less as the stomach is deranged. To relieve the harsh, hot skin, the feet should be bathed in warm water mixed with oatmeal or bran, and should be frequently rested, especially after walking, but the greatest benefit will be derived from the restoration of health under judicious medical advice. A foot bath, contafning the bi-carbonate of potash in solution, is frequently very beneficial.

Cold, clammy feet are indicative of debility, and little relief can be obtained from external applications. Camphorated spirit, or any stimulating preparation, well rubbed over the feet, will, however, be found extremely serviceable.

On the Arch.

The arch of the foot, is in fact, formed by exercise; in infancy it does not exist. As youth advances it becomes, or ought to become more and more marked. To what degree full development may take it, depends partly on inheritance, still more on the freedom with which the foot is habitually used, and the avoidance of prolonged standing, or of standing in a bad position. It is a question of physical education, designed, or unconsciously formed by exercise, the question naturally arises, why is the arch not over-formed and made excessive?

This is partly explained by the influence of the tibialis posticus. It will be seen that the tendon passes under the internal malleoli and stretches across the space unoccupied by bone on which the head of the astragalus falls. Thus it is clear that section of this muscle relieves from strain the ligament crossing the space.

Now the astragalus cannot be driven up too much; the weight of the body will in any case keep to its proper level.

But let us suppose that the scaphoid has been drawn up too high above the level of the internal malleoli, then the muscle in question draws the scaphoid downwards and corrects any excessive convexity as far as that bone is concerned. Any undue springing upwards at the base of the first metatarsal bone is prevented by the peroneus longus which tends to bring that point and the outer ankle towards each other by means of the tendon passing obliquely across the sole. Although this is one of the agencies for bracing up the arch, it also keeps the inner side of the foot down, and prevents undue springing. The tib posticus and the peroneus both assist in forming and limiting the formation of the arch.

An excessive form of arch may exist as a deformity, but it is due to a morbid contraction of the fibrous plantar fascia, not to healthy muscular contraction.

Invertion as the Strong Position for Arch.

When the foot, with the sole flat on the ground is everted (the toes turned outwards) the scaphoid bone is rotated downwards and the ligament uniting it to the os calcis is relaxed. This (the calcaneo scaphoid ligament) is the support of the head of the astragalus, which therefore is the less supported, and has, in this position the greater tendency to skin. If, however, the scaphoid bone is rotated upwards, and the ligament in question tightened, this gives the head of the astragalus a firmer support. Thus for the foot, the latter is the strong position, and the former for the weak position. This is an important point in the question, "How should we stand?"

Action of Flexor Longus Hallucis on Arch.

This tendon has to the arch of the foot which it subtends, the relation of a chord to an arc, of a bow string to a bow. Now this arch, or bow is made of flexible material. The bones are bound together by ligaments, still not so firmly bound as to permit of a considerable extent of yielding. If the arch is yielding and the muscles acting on this tendon be strong, the action of the muscle must brace up the arch as certainly as tightening a bow string increases the convexty of the bow in diminishing the distance between the ends of it. Some shortening of the sole ought therefore to take place in the act of rising on tiptoe.

Experiment.

Let a tape be laid on the floor and trodden on in a line with the sole of the foot (naked) the end at the heel being carried round and held at a point on the skin in the middle line behind the ankle. Now stand on tiptoe, bearing the weight of the body on the foot. It will be seen that the tape (assuming the foot to be in a healthy working order) will be visibly slackened.

(THE END).

THE INGENIOUS CHIROPODIST.

By Alfred Joseph.

There are chiropodists who are very skillful at operating—so clever in fact that when they have finished at operating on a corn or callosity not one vestige of the hardened tissue remain, and the skin is as soft and smooth as a baby's.

Then there are other chiropodists who are not quite so skillful in the handling of a knife, but who, in the treatment of the various conditions which come to them, display a degree of intelligence and ingenuity which goes a long way toward making the profession of chiropody and those engaged in its practice looked up to as most necessary factors to the comfort and well being of the community at large.

It is this latter class of practitioners that devises the neat bandages and well-fitting shields which many extraordinary cases of foot trouble require. They are the ones who are responsible for the many improvements which have been made in chiropody methods in recent years. And the generous spirit which moves them to disclose their inventions for the benefit of suffering humanity is most praiseworthy.

It is not the purpose of this article to praise any one man or set of men, but rather to encourage chiropodists to help one another by relating their methods of affording relief in cases of painful feet not directly in the line of chiropody.

In conversation with one of these ingenious practitioners, he cited a case where the patient could scarcely walk on account of the burning sensation on the soles of his feet.

On examination, it was found that the heads of the metatarsal bones had no covering except the skin, there being no muscles to act as cushions to support the weight of the body.

No corn or callosity marred the integument, and the case was one not really belonging to chiropody.

Here was a man in agony who came to a chiropodist for relief because he had heard of the good work which chiropodists perform on aching feet.

The treatment was purely mechanical. Taking a piece of felt a half inch thick, the chiropodist shaped it to fit the sole directly back of the heads of the metatarsals, and adhered it to the skin with Griswold's salve. As an auxiliary means of holding it in place, a one-inch strip of Z. O. plaster encircled the foot.

When the patient had his foot-gear on again, he stood up, took several turns about the room, and declared the contrivance a great success.

There are many other conditions in chiropody which call for a display of ingenuity on the part of a chiropodist. The making of cotton-collodion dressings, while simple, are comfortable and neat in appearance.

And so it is with bandaging a toe or strapping a foot for weak arch. The ingeniuos chiropodist will work to advantage and utilize the materials at hand for the benefit of his patient, thereby adding to his prestige as a competent practitioner, and securing for himself the best fees.

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A TALK ON BACTERIOLOGY.

By Alfred Joseph.

Disease germs cause the death of over fifty per cent. of the human race. In addition, they are responsible for a vast amount of suffering. Every year millions of dollars are spent in caring for the sick; and hundreds of thousands of people rise from beds of sickness, weakened for life by diseases caused by these small enemies of mankind.

It is claimed that germ diseases are preventable. Pasteur says: "It is within the power of man to cause all parasitic diseases to disappear from the world." The most useful facts of all science, therefore, are the facts that give us a knowledge of disease germs and how to avoid them.

Disease germs are either one-celled animals, called protozoa, or one-celled plants called bacteria. The principal breeding places of protozoa and bacteria are in water and in the earth.

Germs enter the body through the skin, working down through the hair follicles and sweat glands, or getting into wounds. The germs of some diseases are introduced into the body by the bites of insects. More commonly, germs enter the mouth or nose and grow in the walls of the air passages, the walls of the allmentary canal, or in the lungs.

When disease germs grow in the body, they produce substances called toxins. The toxins are very virulent poisons, and cause illness by poisoning the cells of the body. It is not the germs themselves, but the toxins that the germs produce, that cause the disease.

Germs that get into the body are killed in two ways—by the leucocytes and by a germicidal substance that is in the blood.

The leucocytes gather around the germs and take them in, or swallow them. Then the leucocytes attempt to digest and kill the germs, and the germs try to grow in the leucocytes and use them for food. If the leucocytes triumph, the germs will be destroyed and the disease checked. If, on the other hand, the germs are victorious, the leucocytes will die, the disease will spread, and the patient will succumb.

Just what the germicidal substance of the blood is or where it comes from is not certainly known; but there is some substance dissolved in the blood that kills germs that get into the tissues of the body.

The blood of a healthy person always has some germicidal substance in it and some power of killing germs. When disease germs get into the body, more of this substance is manufactured and thrown off into the blood, where it acts as a powerful aid to the leucocytes in the battle against the germs. The turn of the fever in germ diseases comes when the leucocytes and the germicidal substance begin to overcome the germs.

There is a different germicidal substance for each different kind of disease germ, and after recovery from an attack of a disease, a large amount of the germicidal substance will be found in the blood. This remains in the blood for years, and practically renders the patient immune to a second attack of that same disease.

In chiropody, we occasionally come across a patient whose blood is in poor shape, the leucocytes offering but a feeble resistance to the invasion of germs. Such persons can usually be picked out by the pallor of their skin, by their nervous actions, and by the fear they display of being cut.

While operating on the feet of such persons the chiropodist should exercise the greatest care to avoid cutting into the tissues, or to even cause an abrasion, for it takes a long time for a wound to heal in such persons, the reparative processes being very deficient.

The germicidal power of the body is inherited in races as well as in families; but it is the lack of power to kill the germ, and not the germ itself, that is inherited.

Protozoa causes many diseases of man. Among them are malaria, dysentery, smallpox, and rabies. The germs of malaria are carried by the mosquito. Dysentery usually comes from impure water. The germ of smallpox is easily spread, and few persons naturally have the power to resist it. By vaccination, the germicidal power of the body toward the smallpox may be raised and the disease controlled. Rabies comes from the bites of dogs.

Bacteria are so extremely small that millions of them have plenty of room to swim about in a drop of water. They multiply remarkably fast, are everywhere about us—in the water, in the soil, and clinging to the small particles of matter that are always floating about in the air.

Millions of bacteria are always growing on the human skin. Some kinds of bacteria are useful; most kinds are harmless; but a few kinds produce toxins in the human body that cause some of our worst diseases.

Bacteria are cylindrical (like a fire cracker), spherical (like a marble), or spiral (like a corkscrew). The cylindrical bacteria are called bacilli. The spherical are called cocci, and the spiral are alled spirilla.

The bacteria met with in cases of infection are known as staphylococci (like bunches of grapes), and streptococci (in the form of chains). When these enter the tissues through a wound, they cause inflammation and form pus, resulting in boils, carbuncles, erysipelas, and septicemia (blood-poisoning).

The pus-forming germs found in cases of erysipelas and abscesses are often very maligant, and care should be used to prevent their spread.

It is exceedingly important to open up infected wounds, boils, and carbuncles, and get the matter in them out of the body, for it is injurious and dangerous to allow it to remain and be reabsorbed by the blood.

Pus is composed chiefly of germs, dead tissue cells, and dead leucocytes which the germs have killed.

After an abscess has been cleaned out of all foreign substance, a few drops of peroxide of hydrogen should be applied to the cavity, thereby destroying the germs by oxidation. Then the cavity should be swabbed out with pure carbolic acid (to destroy the membrane of the pus sac), and neutralized with alcohol; after which a dressing consisting of sterile gauze and Balsam of Peru may be applied, in order to stimulate the granulations.

Acute rheumatism is a germ disease. Some think it is caused by pus-forming bacteria growing in the joints, and others hold that it is caused by a very tiny germ of is own.

Tetanus (lock-jaw) is caused by a bacillus that is commonly found in the earth about door-yards and gardens, in the dust of streets, and in great abundance about stables where horses are kept. The tetanus bacillus grows especially in wounds made by unclean instruments, because such wounds are likely to be infected with this germ, and because pus-forming germs and particles of dirt are left in such wounds. It grows best of all in small, deep wounds like those caused by an unclean nail, because such wounds readily close over and leave the tetanus germ, with other germs and foreign matter, buried deep in the flesh and away from the air.

The tetanus germ makes only a very slight growth in the body, but it produces a toxin of tremendous power. This toxin for man is a poison two hundred and fifty times as strong as strychnine. It poisons the nervous system, and through this so affects the muscles that they are all thrown into contraction.

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DR. IRVIN MAYER.

On the first page of this issue we depict the urbane features of Dr. Irvin Mayer. It is a good likeness. It's so good that when his mother gazes on it we can hear her exclamation of "Monna shumma! Sis goot!"

Dr. Mayer was born in Williamsport, Pa., forty-four years ago. One of his first situations was with Stern Brothers, where he held the responsible position as runner, his duties consisting chiefly of sprinting every time the saleslady cried "Cash!"

In due time Irvin became tired of running, his aching feet requiring all of his attention when off duty. One day he conceived the idea of treating other people's feet as competently as he worked on his own.

So he opened an office and today has a nice practice. He is quite a society man, being a member of Lebanon Lodge, F. and A.M., Sioux Lodge, K. of P., the Pedic Society, a Director in the Chiropodists of America, trustee of the School of Chiropody, member of the National Association of Chiropodists and several Keveras.

Dr. Mayer is a bachelor—one glance at his neat office will confirm that. He has a place for everything and everything in its place. He never throws anything away that might come in handy some future time. Hence, one night when our auto lamp went out for want of oil and every store in the neighborhood was closed, he produced a can of kerosene from some dark cubby hole.

Through his uniform even temper, Dr. Mayer has made firm friends with all the students of the School of Chiropody, every one of whom he assisted by word and deed. He is a most accommodating chap, a splendid story teller, and a man without bad habits.

If there were more Irvin Mayers in chiropody the profession would be far better off.

DIABETIC GANGRENE.

Santa Barbara, Cal., Oct. 22, 1912.

Editor Pedic Items:

Having had, during this year, two cases of gangrene of the foot, I thought it might be of interest to chiropodists to know a little about such cases in order that they may not be lead to treat them personally but **insist** that they call in the doctor without a moment's delay.

The first case had been treated by a so-called chiropodist for a week. The old man, over eighty, was "set agin' doctors"—but when he came to me, I saw at once that it was no case for me and I sent for his daughter, who soon was convinced that her father must lay aside his prejudice. The old fellow lost three toes by the delay.

The last case was that of a man suffering from diabetes. He had not thought it necessary to show his feet to his medical advisor; but when I pointed out the danger, he went straight over and I was rewarded by the doctor thanking me for showing that I knew my business.

The symptoms often come on so gradually that an inexperienced chiropodist might easily overlook an early case; and it is these early cases that mean often the death of the patient, if allowed to go too long.

Whenever a patient complains of a numb, pricking sensation, and the toes look either paler or darker than the rest of the foot, it is time to be "on guard."

It may be only one toe or more. The part is always cold, generally decidedly clammy. There is no power to move the toes and, except at the very outset, little or no pain is experienced in the part affected though much pain in the neighboring parts.

It is not every chiropodist whose fingers are so sensitively organized that they can detect pulse in the toes; but it is very useful, and one can train their fingers to be nearly as wonderful as a blind man's. If you have this gift, you will find no pulsation in the toe affected by gangrene. Often the patient complains of cramps, and always a heaviness in the foot—sometimes in the whole limb.

There are several different kinds of gangrene but all show up much the same symptoms to the chiropodist who may be a novice.

Yours truly,

HELEN C. SEXTON.

P. S.—By the way, I have taken notice of fifty pairs of feet during this year. In thirty-seven cases the second toe was longest. I am now very careful to instruct such patients which you see seem to be in the majority to have measurements for shoes taken from **that** toe, and not from the big toe, as formerly.

ARE YOU A MEMBER OF THE NATIONAL ASSOCIATION?

Every chiropodist should be a member of the National Association of Chiropodists. All trades, professions, and industries are banded together for protection of mutual interests, and to keep abreast of the times in knowledge in their special occupations.

Therefore it behooves every chiropodist to join the National Association. Each member receives a handsomely lithographed certificate, duly signed and under the seal of the Association. Besides this, he or she receives a free subscription to the Pedic Items, the official monthly organ of chiropody.

The principal object of the National Association is to secure the enactment and enforcement of just chiropody laws in all the States, thereby elevating the standard of the profession.

The annual dues are only $5. For further particulars, address Ernest Graff, 1245 Lexington Avenue, New York City.

COMPLIMENTS FROM CLEVELAND.

Cleveland, O., Nov. 1912.

Dear Items Readers:

During my recent visit to New York, I had the pleasure of meeting with the State Pedic Society and attending some lectures and clinics of the School of Chiropody.

Impressions obtained from meeting Drs. Alfred Joseph, Graff and Griffin at the National Convention led me to expect big things, and I was greatly pleased to meet President George Erff. I wish you could all know what we owe to these men who have given so much time and effort, without compensation, to making this school a possibility and planning for its splendid future. Those who can take the post-graduate course offered chiropodists will find themselves well repaid for any sacrifice of time and money.

I hope chiropodists in all the States will get together for action along the lines recommended by our National officers for securing State Legislation. This means not only protection for the public, but keeping up-to-date in equipment and practice ourselves.

Yours for success,

MADAME KNOWLES.

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The Pedic Items

(Issued Monthly)

Publication Office: 80 West 90th St.

ALFRED JOSEPH.....Editor
EDWIN K. BURNETT....Asst. Editor
ERNEST GRAFF ..... Manager

Published by THE PEDIC SOCIETY of the State of New York

GEORGE ERFF, Pres., 28 W. 28th St.
MAX NACHBAR, Sec'y., 437 Fifth Av.
M. REDELL, Treas., 280 W. 113th St.

Subscription Price, $2.00 per year.
Single Copies, 25 cents each.
Advertising Rates, $2.00 per inch.

THE SCHOOL OF CHIROPODY.

On Monday, November 11, 1912, the students of the above institution assembled for the first time in the new School quarters, 51-53-55 East 125th Street, corner Madison Avenue. Quietly and onobtrusively was the change made from the old to the new—however, the incident marked an era in the history of chiropody which will for all time be eventful. The busy practitioner of chiropody on reading this item will cease his activities long enough to rub his eyes and then permit memory to reproduce the scenes enacted when he was in his apprentice years as an embryo in pedic work. He had no didactic lectures or laboratory instruction bearing on anatomy, physiology, materia medica, therapeutics, chemistry, hygiene, pathology, bacteriology, surgery, foot-gear and mechanism of the foot to guide him along in his lifework's path. There was no elaborate clinic with a score or more of patients nightly whose cases he could treat under the direction and advice of an experienced practitioner. No! He had to be content with picking up the useful features of his practice as his vicarious experience and his limited work and his preceptor's humors would permit. The scientific part of his activities were such as his eye could recognize in his daily walks or as he may have accidently heard a recounting of some anatomic or physiologic truth from a family doctor of medicine. In spite of all these handicaps the chiropodist of the past achieved much and greatly. Still no one will rejoice at the dawn of the new era more than he. His calling has been dignified. His fellow of the future is to be educated academically, to be equipped scientifically and to be licensed legally and in order. He will have a status among those belonging to the learned callings and in consequence is to become a factor in the human uplift that is to mark the progressive age into which we are passing. The School of Chiropody is to be the central point for the emanation and the distribution of these factors. Lecture rooms, laboratories, paraphernalia—all that is essential to scientific instruction along the lines of the work are in evidence in the new quarters and heads of departments to the number of eleven together with their assistants, are skilled each in the character of the work he essays. The clinical department of the School, which is to be in operation every night from 7:30 to 10 o'clock, will be a feature of the institution highly attractive to students and of great interest to humanitarians. Sixteen operating outfits are provided for this purpose so that sixteen patients can be cared for at one time. Here the deserving poor, afflicted with foot maladies, may be nightly treated free of charge. The clinicians in charge will be from the foremost practitioners in the city and under their guidance the student will be afforded opportunity to observe and to treat all the characters of the diseases common to the foot. No expense has been spared in fitting out the student equipment. In fact every feature of the School has been placed on such a high plane as to warrant the enthusiastic support of the profession as well as the laity. An advisory committee of prominent citizens of New York is now being organized to further the plans of the clinic and with this support provision for added facilities will be available as conditions warrant.

THE NOVEMBER MEETING.

A large attendance of Pedic members at the November meeting was present.

The business consisted chiefly of routine. Immediately after adjournment, the prosecuting committee held a session.

The following named persons were elected to membership: Lucien Coquet, Walter J. Harrington, Eugenie R. Sticht, Alonzo Ward, Maude S. Whalen, Jno. T. Whalen, Frederick C. Zobel, Mary E. Harvey, Georgianna R. Diamond, Chas. M. Ehrlich.

CHIROPODIAL COMMENT.

By the Editor

The School of Chiropody of New York has moved to its large and commodious quarters at 51, 53 and 55 East 125th Street, corner Madison Avenue. A free chiropody clinic will be maintained every evening from 7:30 to 10 o'clock.

The study of Chiropody is now restricted by law in New York State to those who have a minimum academic education equivalent to one year's attendance at a registered high school and the practice of chiropody is confined to those who, having graduated from a registered school of chiropody, have received a license from the State Board of Regents certifying to the effect that they have passed the State examinations in chiropody. The graduates of the School of Chiropody of New York will be so educated as to insure their being able to meet any proper test of efficiency which will be required of them anywhere. The faculty of the school is composed of men of ability in the chairs which they fill, each being a specialist in the line of his specific work. The course is comprehensive, scientific and exacting. The equipment of the school is as complete as possible. The aim of the management is to elevate the standard of chiropody practice so that it shall become a scientific and dignified calling.

A mechanic, on whose foot a heavy object had fallen, went to a hospital for treatment. The doctor examined the great toe, which was bruised and painful, and gave it a coat of tincture of iodine. That evening, the patient limped into the chiropody clinic. After cleaning the toe with an antiseptic solution, the instructor pricked the skin at the back of the nail, thereby permitting a bloody serum to exude. When all the fluid had been removed the pain departed, and the toe was dressed with Maargunt, and Borow's solution, and encased in a gutta percha protective. At the next clinic, two evenings later, a dry dressing was applied to the toe; but as the nail was loose, and the matrix contused, the instructor removed the nail at the next visit and again applied a borowii dressing.

Many a case has been diagnosed as "ingrown nail," and treated as such, when in reality the offender was only a small corn or callosity in the nail groove.

It requires a clinical experience to prepare one to thoroughly understand and treat chiropody cases. In such an institution the practitioner not only gains knowledge and experience, but he develops confidence in himself; and this same confidence is imparted to his patients who soon get to rely on his ability and sound his praises to their friends.

Dr. Edwin K. Burnett, chief clinician at the School of Chiropody, has appointed the following chiropodists as assistant clinicians: Otto Sjogren, Charles Streck, Joseph P. Solomon, L. H. Phillips, Walter Teskey, Monroe Redell, Frederick Jasmund, George Barber, Irvin Mayer, Ernest Graff, and Louis Freda.

Due to the influence of the Pedic Items, some sixty chiropodists of England, met at the call of Dr. Scherf on November 14, for the purpose of organization. They intend to apply to the House of Commons for a charter and hope to obtain protective laws which will elevate chiropody to a high standard. Among the members of the new society are the chiropodists of King Edward and Queen Mary, and many others who regularly attend the nobility.

A New York City chiropodist, desirous of making a few dollars easily, while on his vacation in July, called on an up State practitioner. The latter had, a year previous, expressed a desire to take out a Physician's Liability Policy.

The visitor produced an application blank, and instructed the up-Stater to fill it out as directed. He then demanded $5 before he would tell him the name and address of the insurance agent. The up-Stater paid the $5.

That evening, as he reviewed the matter, he concluded that he had been made the victim of a petty scheme, and accordingly he wrote a complaining letter to us.

We communicated with the New

York City chiropodist, and requested his side of the story. He replied that he was his own master, and had a perfect right to charge for any information he gave which might be of benefit to another.

Meanwhile the up-Stater sent his application to the insurance people, and it was returned to him in a few days with the information that the company refused to issue a Physicians' Liability Policy to any one outside of New York City.

This brought another letter to us from up-State, and again we wrote to the New York City chiropodist to the effect that if he did not refund the $5 we would publish the entire story in the Pedic Items, as both parties were members of the Pedic Society.

The $5 was refunded, but the letter of abuse we received for compelling the return of the money was entirely unjustified.

The Albany Division held a banquet at Keeler's Hotel on the 19th. Preceding it the annual election of officers took place.

Dr. Henry Rosenhain, formerly of the Singer Building, New York, now devotes all his time to his Jersey City practice. For fifteen years he was located at 132 Newark Avenue, and he would probably have been there fifteen more, but a fire broke out and —well, corns burn easily, and he is now located at 313 Grove Street. Good luck to you, Hank!

Clara S. Houston, formerly assistant to Dr. I. J. Reis, of Chicago, has opened an office in that city.

The following is recommended as a good remedy to be painted over the surface of unbroken chilblains:

Euresoli	1-2 dram
Eucalyptoli	1-2 dram
Ol. Terebinth	1-2 dram
Collodii	5 dram

A very useful device and one which every chiropodist should install in his office is the "Anywhear Lamp Bracket." It is readily adjustible and can be placed in any position desired, or can be folded into a little out-of-the-way corner. All the leading chiropodists use them.

Civilization turns on organization; and organization, in order to be of any value, must be scientific.

He was a chiropodist in the employ of a woman who ran a chiropody and manicuring establishment in the heart of the shopping district. For five year she paid him a salary for treating the feet of the people who patronized the place. One day somebody told her to make an application for a license by affidavit. Her employe helped her in procuring the ten necessary affidavits, and after due investigation, the board of examiners granted her a license. Under the old law they had no alternative. As soon as she had the document recorded in the office of the county clerk, she gave her employe his walking papers. He is hunting a job now, a sadder and wiser man. But he cannot say a word, on the ground that he might incriminate himself.

Dr. J. C Cheesman, of Camden, N. J., recommends the following antiseptic solution for instruments, as he claims it will not rust, tarnish or injure the cutting edge in any degree:

R— Hydrargi Cyanide	1 dram
Bicarbon. Sodii	1-2 dram
Aqua	1 quart

Boarder: How is the corn this evening?

Waitress: All right, thank you, I've got my old shoes on tonight.

The physicians and chiropodists engaged in the work of instructing the students at the School of Chiropody of New York have undertaken the task of writing a Text-Book of Chiropody." The subjects will embrace anatomy, physiology, chemistry, therapeutics, minor surgery, bacteriology, hygiene and pathological chiropody. The work will be published in two volumes, and the price $10. In order to ascertain the number of copies required, it is advisable to send in your order at once.

A meeting of the Chiropodists of Manitoba was held at Dr. George S. Smyth's Chiropody Parlor, at Winnipeg, Man., on Wednesday, October 30th, at 8:15 p.m., relative to form-

ing an association to protect the interests of those now in the profession, by having a bill put before the Legislature Committee this term.

If some chiropodists would work their mouths less and their brains more we would all be better off.

We have received a certificate of membership in the Missouri Pedic Association and have had it framed.

The landlord has threatened to raise our rent. We told him that we had trouble enough many months trying to raise it ourselves.

The Missouri Pedic Association held their annual meeting on November 4th and re-elected the following officers: Joseph W. Carpenter, president; Hiram Clark, vice-president; John Betz, secretary; Camden Woofter, treasurer. The reports show that the Association is progressing. Four new members were elected.

"You don't see so many poor people nowadays," said Redell, who was discussing politics with Irvin Mayer.

"No," replied Irvin. "Half of them get run over by automobiles, and the other half are afraid to leave the house for fear that they might be."

Maargunt Ointment sold at 2.00 per dozen. F. O. B. New York. Try as much as you want and be convinced of its merit.

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PERSONAL.

Miss B. E. Leyden, the well-known chiropodist of Oswego, is now Mrs. John Moroney. She married an M.D., who is a specialist in eye, ear, nose and throat troubles. Mrs. Moroney has such a large practice that she cannot abandon it entirely, and is therefore compelled to give part of her time to attending to her many patients.

Dr. George Barber's son has matriculated in the New York School of Chiropody and will learn to be a scientific chiropodist.

Drs. Broberg and Perratore are requested to call at the School and get the communications addressed to them.

Dr. Harry H. Moore, former treasurer of the Pedic Society, and Mrs. Moore, having retired from practice, are now living in Manchester, N. H.

Dr. L. H. Phillips, having tried his luck both in Broadway and Fifth Avenue, has returned to his former position in Riker's.

Dr. W. D. Buell of Hartwick, N. Y., visited the School and afterward called on several chiropodists.

One of the Pedic members who, by the way, is a great baseball fan, was recently asked how large a family he had.

"Well," said he, "I have two home and one on third."

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THE QUIZ CLASS.

In this department, the opportunity is afforded all chiropodists of enhancing their knowledge of anatomy, physiology, chemistry, therapeutics, and minor surgery. These subjects are requisite to pass the State Examinations for chiropody in New York and New Jersey, and are taught in the School of Chiropody.

Anatomy.

36. Q.—What is a bone, and what are the uses of bone?. A.—The hard tissue forming the framework of the body. It is composed of gelatine, phosphate of lime, carbonate of lime and other ingredients. Bones are useful as a protection and covering surrounding cavities. They support the weight of the body and act as levers for moving the parts of the body.

37. Q.—Describe the construction of the first metatatarso-phalangeal articulation. A.—It is the union of the first metatarsal bone with the first phalanx of the great toe. It is a ginglymoid joint, and has an exterior or plantar and two lateral ligaments. It is lined with a synovial membrane. The tendons of the extensor proprius hallucis supply the place of posterior ligaments.

38. Q.—Describe the construction of the foot as a whole and compare with the hands. A.—The foot has 26 bones, of which the tarsus has 7, metatarsus 5, and phalanges, 14. There are 28 articulations in the tarsus, each bone articulating with 4 others, except the os calcis, which articulates with 2, and the external cuneiform with 6 bones. The anterior and posterior tibial arteries and their branches carry the blood supply. Nerves, muscles, ligaments, tendons, etc., give strength and stability. There are 5 toes at the ends of which are nails. The hand consists of 27 bones, of which there are 8 in the carpus, 5 in the metacarpus, and 14 in the phalanges. There are 34 articulations in the carpus.

39. Q.—What are the variations of bursa, and what form is principally found in the foot? A.—Articular, vaginal, and mucosa.

40. Q.—Give nerve supply of the dorsal surface of the foot. A.—Musculocutaneous, external saphenous, anterior tibial.

41. Q.—Give course of plantar nerves and arteries. A.—Internal plantar runs along inner side of foot and great toe, giving off muscular, cutaneous and articular branches. External plantar artery passes obliqely outward and forward to the base of fifth metatarsal, whence it curves inward to the interval between bases of first and second metatarsals, there anastomosing with plantar digital branch of dorsalis pedis, completing the plantar arch.

42. Q.—What do you understand by the term "flexion?" A.—The process of bending.

Physiology.

31. Q.—What can you say regarding the peculiarity in the mode of growth of the nails? A.—Inasmuch as nail contains no blood vessels or nerves, it cannot get direct nourishment, but depends, for its growth, upon the neighboring strata of the skin. New cells are added from below as well as at the root. At the back part of the nail, the skin forms a deep fold, from the bootom of which new epidermic cells are constantly being added, which forces it to slide forward over its bed. Nails are a modification of the epidermis and are composed of three layers thereof—stratums corneum, lucidum and granulosum. As the nail grows these three layers move forward, while the stratum mucosum remains stationary.

32. Q.—Why, when an artery is cut, does the blood spurt forth in jets, but does not from capillaries? A.—At every beat of the heart, a force of blood (about six ounces) is propelled through the arteries (which are already full), giving shock to the entire mass of fluid. The arteries, being elastic tubes, dilate by the pressure of the increased quantity of blood forced into them. Before the next throb of the heart comes, the tension of the arterial walls is exerted, thus forcing a quantity of the blood into the smaller arteries, thence into the capillaries, and from them into the veins, to be returned to the heart. If there was a cut in an artery, instead of the latter dilating, the blood would spurt out in jerks, corresponding with the intervals of the heart-beats. The capillaries do not expand and contract and so the blood does not spurt from them.

33. Q.—What useful purpose do the nails serve? A.—They protect the fingers and toes, aid in picking up minute objects, and, when well-kept, are an adornment to the fingers.

34. Q.—What is the function of the extensor brevis digitorum muscle? A.—Extends first phalanges of 4 inner toes.

35. Q.—Define the word "function." A.—The normal or appropriate action of a part of the body.

36. Q.—Why is the color of the blood dark-red in the veins and bright red in the arteries? A.—Due to the presence of hemoglobin, a coloring matter, in different degrees of oxidation.

37. Q.—Does the blood give an acid or an alkaline reaction? A.—Alkaline, in health.

38. Q.—How is bone nourished? A.—By means of the blood vessels in the periosteum, and the arteries which penetrate the Haversian canals in bones.

39. Q.—How is the sensation of pain produced? A.—By an excess of any action to which nerves are sensitive, such as temperature, pressure, irritation, injury.

40. Q.—What is meant by the condition of tetanus in a muscle? A.—A state in which the muscle continually vibrates (contracts and expands), as when subject to electric shocks.

Therapeutics.

29. Q.—How would you cut a shoe that produced lateral pressure on a foot, such pressure being undesirable? A.—Cut through the leather at the metatarso-phalangeal joint about 1-4 inch above the sole, continuing the cut to the middle of the front of the shoe, thus relieving all pressure.

30. Q.—How does the action of borax differ from boric acid? A.—Boric acid is applied to surface wounds, burns and eczematous surfaces. Both boric acid and borax, have the power of destroying micro-organisms, and are thus disinfectant and antiseptic. Both substances are used to keep wound, ulcers and sores sweet. Borax has the power to take up oxides and reform metaborates.

31. Q.—Mention the therapeutic uses of carbolic acid locally, other than as an antiseptic. A.—5 per cent. solution is a local anesthetic, 95 per cent. solution is a caustic.

32. Q.—What is bromodrosis pedum? A.—Fetid perspiration of the feet due to the decomposition of the sweat in the glands.

33. Q.—Under what conditions would you advise cold applications? A.—For severe inflammatory processes.

34. Q.—What are counter irritants? When the vessels of the skin are dilated by the application of an irritant, those of the subjacent organs are often reflexly contracted. An irritant is called a "counter irritant" when it is applied to the skin with the object of altering the size of the vessels of the subjacent organs.

35. Q.—What is eczema? A.—An acute, sub-acute or chronic inflammatory disease, characterized in the beginning by the appearances of erythema, vesicles or postules, or a combination of these lesions with a variable amount of infiltration and thickening, terminating either in discharge with the formation of crusts, in absorption or in desquamation, and accompanied by more or less intense itching and a feeling of heat or of burning.

36. Q.—Name some of the remedies useful in treating chilblains. A.—Oil of turpentine, balsam of peru, tincture of iodine, tincture of benzoin, 15 per cent. ichthyol in collodion, and strongly carbolized ointments.

37. Q.—What is the effect of iodine locally applied? A.—Iodine is an irritant, also vesicant if used in quantity, staining the skin yellow. Also an antiseptic and alterative.

38. Q.—Name the acid most commonly and successfully used in the treatment of vascular corns. A.— Nitric acid.

39. Q.—What is the common name and therapeutic use of plumbi acetatis? A.—Sugar of lead. Useful in skin diseases, burns, and inflammation.

Chemistry.

41. Q.—What is specific gravity, and give several rules for finding the specific gravity of a body? A.—The specific gravity of a substance is a number representing the ratio of the weights of equal volumes of the substances and water. (Air is used as a standard for gases). For instance, when we say the specific gravity of gold is 19 we mean that gold is 19 times as heavy as water; that, for instance, a cubic inch of gold is 19 times as heavy as a cubic inch of water. To find the specific gravity of a body, weigh it and then weigh an equal amount of distilled water at 39 degrees Fahrenheit. Divide the weight of the water into the weight of the substance, and the quotient will be the specific gravity thereof.

42. Q.—How do physical and

chemical changes in matter differ from each other? A.—Whenever a chemical change takes place, a new substance is formed. A physical change only changes the state of the substance, without producing a new substance. Example of chemical change; neutralization of nitric acid by potassium hydroxide producing potassium nitrate and water; physical change heating iron red hot.

43. Q.—What is the molecular weight of H2O? A.—18.

44. Q.—What does the word atom signify? A.—Indivisible.

45. Q.—What is the chemical composition of bi-chloride of mercury? A.—Mercury, 1 atom, chlorine, 2 atoms.

46. Q.—What is the antidote to nitrate of silver? A.—Cyanide of potassium or salt. KCN external, Na Cl internal.

47. Q.—Which of the mineral acids is the strongest? A.—Nitric.

48. Q.—What is the chemical composition of Monsel's Solution? A.—Fe4 (SO4)5 O. Iron, 4 atoms; sulphur, 5 atoms; oxygen, 21 atoms.

49. Q.—What produces the characteristic black stain when nitrate of silver comes in contact with animal tissue? A.—A deposit of metallic silver, formed by the reaction of Ag N O3, with the organic material in the presence of light.

HAIR IN CORNEOUS TISSUE.

Elmira, N.Y., Nov. 4th, 1912

Editor Pedic Items:

Some few years ago, in one of our Pedic Items, mention was made by someone of a case where they found a hair or hairs on the sole of a patient's foot. I remember the article sort of ridiculed the idea.

I remember the article accompanying that statement sort of ridiculed the idea.

Later on I had occasion to treat a Mr. Floyd, of Olean, N.Y., for a little disturbance in the sole of his foot. In this I found a little hair curled up under a small pimple, much the same as hairs grow under the skin on some men's faces.

I gave you a description of this case, but as yet have not noticed it in the Items.

Six months ago, I had a little trouble in the ball of my right foot. Mrs. Stevens removed a small corn and a small curled hair popped out and was lost.

Three months afterward a repetition of the trouble occurred. This time the hair was cut off and again lost.

Today I had another sensation of pain in the same place. Mrs. Stevens again removed a little pest of a corn, and remembering the little hair, proceeded in a very cautious manner, she saw the little dark streak. Sure enough, there it was!

I enclose the offender. If your naked eye will not discern it readily, take a tweezer and hold it under a microscope and you will see it very plainly, not all however, because a portion is still in the foot, it having been cut off.

By photographing from a side view, then enlarging, it will be illustrated more plainly.

Yours sincerely,
CHARLES F. STEVENS.

Creaking shoes can be made noiseless by soaking the soles in linseed oil; turn a small quantity into a pan or plate and let the soles stand in it for twenty-four hours. This treatment will also render them waterproof.

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See Pedic Items of October and November

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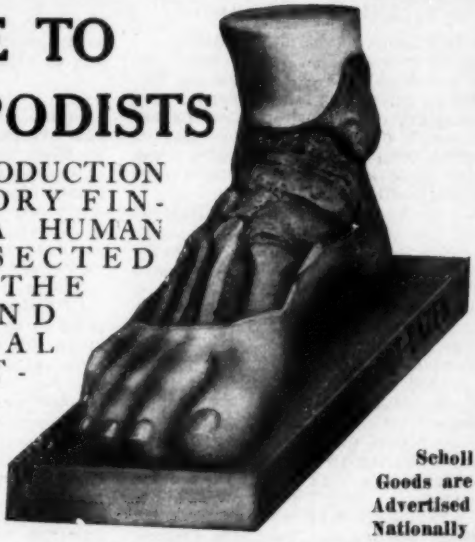

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ESSENTIALS ON CHEMISTRY AND THERAPEUTICS.

By Richard W. Schissel.

I took notice that almost every article in the "Pedic Items" bears on the same subject——relating to diseases in chiropody, minor surgery and bandaging, or to certain peculiar cases which chiropodists have come in contact with in their practice, and which have also put them in a perplexing position.

All of these articles are undoubtedly of the utmost importance to chiropodists especially to the beginner, for the simple reason, that they are instructive, and one may at times be greatly benefitted by reading all those articles, no matter how old a practitioner he may be.

Very little, however, has been said in regard to chemistry and the physiologic action of certain drugs and chemicals employed in our daily practice. Many practitioners are constantly abusing the use of some chemicals or drugs with which they come in contact. They either "don't believe in them," or are using them without having the least idea regarding their action. They are simply employing certain preparations, because they saw someone else use them.

Recently, I visited a fellow-chiropodist in New Jersey. I looked on while he was operating on a patient's foot. After he was through, he practically painted the whole foot with tincture of iodine; he even painted it between the toes. I inquired of him what purpose he was doing it for, whereupon he gave me the following answer: "Well, you see, iodine makes the muscles strong, and prevents flat-foot."

Last week a woman patient called at my office for treatment. Upon examination, I found an ugly wound, situated right at the base of the prominent joint of the great toe. Upon questioning her, I found out that that she had been instructed by a lady chiropodist to paint the joint with Churchill's iodine, in order to reduce her bunion.

Many similar cases have been met with in the past, which only proves the meagre knowledge of the operator in the action of certain medicaments.

For this reason I have decided to write something pertaining to the chemistry, physiologic action and the therapeutic value of all drugs and chemicals used in chiropody. I have above mentioned about the misuse of tincture of iodine in some instances, so I shall precisely describe the values of this element.

Iodine.

Iodine (I.), (Iodum, U.S.P.) is a non-metallic element, obtained chiefly from the ashes of the seaweed, (a marine plant). It occurs in deep-brown crystals, having a metallic luster, a peculiar odor and is very sharp to the taste. It is soluble in ten parts of alcohol, slightly soluble in water (in 5000 parts) and dissolves freely in chloroform and ether.

PHYSIOLOGIC ACTION—When applied to the skin, iodine leaves a yellowish-brown color , and causes a burning sensation. Strong solutions, or when too freely applied will cause blistering. When taken internally, it is rapidly absorbed in the form of iodids, and soon reappears in all the the secretions of the body. Iodine is a poison. Many cases of fatal poisoning have been reported from its injection into large cysts, and from its too free use externally.

Antidotes for iodine poisoning are starch, and starchy foods, such as flour, arrowroot, etc.

THERAPEUTICS:—Iodine is a very powerful germicide and antiseptic. It produces inflammation and desquamation of the cuticle. Nevertheless, it is a useful counter-irritant in conditions requiring a mild, but persistent effect.

Local applications of iodine have long been held in high repute. In form of an ointment it is used in erysipelas, chilblains and other cutaneous and subcutaneous inflammations and with splendid results. The tincture may be applied in sprains, synovitis, muscular rheumatism and similar inflammatory conditions. It is best applied by means of a camel's-hair brush, one or two coats being painted over the part at intervals of a day or two. If the application proves to be too painful, the iodine should then be removed with spirits of hartshorn, (ammonia water) or a solution of potassium iodide.

In chilblains, an application of tincture of iodine, and glycerine, in equal parts, acts very favorably. It is very effective to subdue pain and inflammation when applied after callous has been removed from the plantar surface of the feet. It is even

customary among the soldiers of the German army, after a long march to paint their feet with tincture of iodine.

Tincture of iodine, when kept a certain length of time, undergoes a gradual change, owing to a reaction between the alcohol and iodine. A portion of the iodine is supposed to take the hydrogen from the alcohol, thus, altering the entire preparation. Water will also decompose the tincture of iodine. Therefore tincture of iodine should always be made fresh, or bought in small quantities, for, from the old or stale tincture of iodine no results will be obtained, and the use of same may cause much damage.

The so-called white or colorless iodine, has absolutely no medicinal or any antiseptic value at all. There are several ways of discoloring iodine; by the addition of sodium sulphide, ammonia water or any alkalies. In every instance however, the iodine enters into a chemical combination, thereby losing all its antiseptic power, and therapeutic value. Therefore, the decolorized or "white" iodine should never be employed, for its has absolutely no value, and is useless for any purpose.

THE EXAMINING POWER.

A prominent chiropodist of the West, who is taking a leading part in the movement toward procuring a good chiropody law in his State, writes for information regarding the best law to advocate. He has had a bill drawn by a lawyer, embodying therein some features from the New York law and some from the New Jersey statute. But he has made the great mistake of placing the examinations under the control of a board of examiners to consist of three chiropodists.

Our Western friend seems to forget that no legislature will pass a law for the benefit of chiropodists. Laws are enacted for the protection and benefit of the public; and it would certainly be no benefit to the public for any board of chiropody examiners to pass upon the qualifications of future practitioners.

This has been tried by the Pedic Society of the State of New York for seventeen years, and, while it limited the number of licensed practitioners, it was not productive of good operators.

Chiropodists, as a rule, are uneducated, and it is doubtful if our Western friends can find in his Pedic Society three patrons of sufficient education to fill the post of a board of examiners.

An educated man knows his limitations, but an illiterate or uneducated one does not. He believes that because he is a good operator, and has a large clientele of educated men and women patients that he is persona grata. But such alas! is not the case. He is patronized for his skill in removing excrescences of the feet painlessly, and he attributes his success in a great measure to his personality.

At some future time, when those practicing chiropody have had the proper training, it will be feasible to place the examinations under the control of a board of examiners consisting of chiropodists. But, in view of the experience had, it would be better, both for the public and the chiropodists themselves, to place the examining power with the State Board of Medical Examiners.

POST-GRADUATE COURSE.

It was the original intention of the Board of Trustees of the School of Chiropody of New York under the new management, to devote exclusive attention to instructing undergraduates in chiropody.

So many requests, however, have been received from practitioners that an opportunity be afforded them to study modern methods in order to better fit them to follow their vocation, that it has concluded to establish a post-graduate course of instruction at the School.

This course will extend over a period of six weeks and will be under the direct supervision of Drs. Erff, Joseph and Burnett and a corps of clinical assistants.

The fee for this course will be fifty dollars. If those who take this course wish, at the same time to devote themselves to special subjects, such as anatomy, Physiology, Chemistry, materia medica and therapeutics, or pathology and bacteriology, opportunity will be afforded them, the charge for each such special topic being thirty dollars additional. There is an abundance of clinical material always available for purposes of observation, study and practical treatment and the work will be carried on in a scientific manner.

A FAKING FOREIGN FOOT-FIXER.

The chaotic state through which chiropody is laboring in our other states, and paticularly in Europe, is well shown in an anecdote related to us the other day by an old practitioner.

"Some few years ago," said he, "a patient of mine, whom I will call Mr. X., while stopping in London had need of the services of a chiropodist.

"I ought to say this gentleman suffered from a small corn under the body of his left toe nail—a corn so insignificant that I used to remove it while he would doze in my chair.

"Upon inquiry at the hotel desk, the clerk, a nice, mild-mannered gentleman, recommended Dr. Z., who was Lord High Foot Fixer to some Lord Higher, etc., etc., as a first-class A 1 chiropodist.

"Upon entrance into the professor's chiropotorium, located, by the way, on one of the principal thoroughfares, a veiled female servant preceded him into a small compartment where she removed his shoes and stockings and proceeded to bathe his feet.

"This completed, his pedals were powdered to the Queen's taste, and upon donning a pair of sandals, Mr. X was led shamefaced into 'The August Presence.'

"The Professor, who was rigged up like an uncle of Herman the Great, met him with a few well-chosen sentences relative to his travels, wealth, etc., spread his regal robes about him, and gently combing his flowing beard with his fingers (this, besides its antiseptic qualities, being decidedly professional) proceeded to the work before him.

"Dr. Z. gazed knowingly at his patient's left toe-nail through a high-powered glass, and turned first a blue, then a red followed by a yellow light upon the digit.

"Had my friend been a yachtsman these colored lights would have spelled C. D. Q., but his land-trained brain could not grasp the nautical signals.

"After a second careful survey the Professor looked up wisely:

"'I find a decided osseous protoplasmic hypertrophy of the epithelial structures, involving the large aponeurosis of the extensor brevis digitorum, and from thence reaching upward and stretching transversely across the cervical cavity of the matrix onychium, having a fixed attachment plantar-dorsalwise on the thrombic anteniae of the great toe. This has caused a slight endocarditis of the sutoriferical lining of the glands papillaris, from whence the greater amount of your trouble ensues.'

"Now to Mr. X., who is neither a graduate of our School of Chiropody, nor a student of the dead languages, this lingo sounded good, though foreign, and he settled back in his chair to await developments. In a moment the very air scintillated with developments.

"With the first jab of the chisel, (or was it a crowbar), Mr. X writhed with pain, gave one dispairing gasp and—fainted.

"How long he was unconscious my friend does not know; but when he awoke again to the realization of things—that whole realization was centered about the great toe of his left foot. The Professor had gone right ahead and completed his job, or a little more so, and the toe was clumsily wrapped in many twistings and turnings of bandage.

"Mr. X could hardly get his shoe on, let alone stand on the injured member. But the Professor was wise and, though English, a 'schmoozer,' cautioned my friend not to use the foot too much and then sprang the price.

"'Ten pounds!!!!'

"For the second time the patient fainted.

"Mr. X refused point blank to pay the learned doctor, and in good old United States suggested a journey once so vividly described by the great Latin poet Dante. But the professor smiled suavely and politely declined the invitation. He was indeed sorry that Mr. X. looked upon the matter in the way he did. He would like to oblige Mr. X., but those were his regular prices and—smile—he was very, very sorry, but Mr. X. would have to pay.

"Mr. X. wouldn't and forced his limping way into the street.

"He had been at his hotel scarcely a half hour when a polite gentleman demanded admittance 'in the name of the King, etc., more politely entered, and, more politely still, seized Mr. X.'s trunks and other seizables to satisfy a lien duly sworn out against him by Dr. Z. for money due Dr. Z. for services rendered.

"Grand fireworks!

"Mr. X. forgot his toe, which must convey to the reader his state of mind at the moment. He raved up and down the room. He raved up and down the hall. He raved to the chambermaid, to the porter, and finally to the clerk who had been the instigator of all his trouble.

"The clerk was sorry—smile—very, very sorry, but Mr. X. had his passage engaged on the steamer sailing tomorrow and he surely would be held up two weeks at least if the claim wasn't settled; and advised Mr. X.—smile—to pay.

And as the clerk turned away to hide tears, he added an additional two or three pounds to Mr. X.'s hotel bill—for abuse.

"Mr. X. paid."

TREATMENT OF INGROWN NAIL WITHOUT USE OF A CHISEL.

By George Barber.

As a general rule, chiropodists will pack a nail so that the cotton or gauze, or whatever is used for the purpose will lay parallel to the nail.

In a good many cases this packing is displaced through the pressure of the shoe and does not prevent the nail from irritating the groove and, as often is the case, helps to form exuberant granulations.

My mode of procedure is to draw a bit of absorbent cotton to about the length of an inch and twist the same so it takes the form of a piece of twine. I place a little Maargunt ointment on the cotton before twisting, as it acts as a lubricant and prevents, at the same time, pus formation.

The cord is then placed on the outer side of the nail and turned under and across the nail, thereby forming a perfect cushion. The ends can be cut off, but a stub must be left to prevent it from slipping under the nail.

This procedure may be repeated three or four times, according to the condition of the nail. The little cords of cotton will act as a drain in cases of pus formation.

If the toe is badly inflamed, and granulations have formed, I apply a wet dressing of acetate of aluminum and use very thin cords until inflammation and swelling are reduced. After a day or two the first dressing may be removed, whereupon it will be found that there is quite some space to insert several of the cotton cords. The ordinary outside dressing will be sufficient at subsequent treatments. Care must be taken at the end of the treatment not to have the cotton too heavy as it is liable to form a corn in the groove. The nail must not be cut out, as it prolongs the treatment. Any sharp corner or splinter may be curetted. If this procedure is continued until the nail is brought out to its full length, you will have affected a permanent cure without shedding any blood.

I have followed this course for the last three years in cases of ingrowing nails with success in every case and have never used a chisel in that time.

I hope this will help chiropodists who are timid about using a chisel; also those who use it too often.

The Pedic Items wishes you a Merry Christmas and A Happy New Year.

OTTO F. SCHUSTER

Manufacturer of

Orthopedic Appliances

The Prof. Royal Whitman Brace for Flat Feet, and Weak Ankles, Constructed from Specially Made Plaster Moulds of the Feet.

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THE SCHOOL OF CHIROPODY OF NEW YORK is now in its new quarters, 51-53-55 East 125th Street, corner of Madison Avenue, prepared to continue the work of educating men and women to become skilled and scientific chiropodists. The equipment of the School is in keeping with the most exacting requirements for the work in hand. One of the features will be the new clinical department, containing chairs and equipment for the treatment of 16 patients at one time. The new catalog of the School will be in readiness for distribution, December 15th, and will contain full particulars.

Members of the profession, visiting New York, are respectfully invited to call on us and inspect the School.